Rejoinder

Claims 4-12, 15, 20-31, 36, 38-40, and 58 are directed to an allowable product. Pursuant to the procedures set forth in MPEP § 821.04(B), claims 53-57, directed to the process of making or using an allowable product, previously withdrawn from consideration as a result of a restriction requirement, are hereby rejoined and fully examined for patentability under 37 CFR 1.104.

Because all claims previously withdrawn from consideration under 37 CFR 1.142 have been rejoined, **the restriction requirement as set forth in the Office action mailed on 02/08/2007 is hereby withdrawn**. In view of the withdrawal of the restriction requirement as to the rejoined inventions, applicant(s) are advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Dr. Garth M. Dahlen on 03/27/2009.

The application has been amended as follows:

The claims:

4. (Currently amended) A foamed laminate based on olefin in which a substrate layer is laminated with a **non-foamed** skin layer, wherein the foamed laminate is a co-extruded product in which the substrate layer and the skin layer are heat fused and the substrate layer is foamed by co-extrusion by multilayer extrusion molding machine, wherein

said substrate layer comprises a foamed body (X_{F1}) comprising an uncrosslinked ethylenic thermoplastic elastomer (A) comprising 5 - 60 parts by weight of a polyethylene resin (a-1) and 40 - 95 parts by weight of a copolymer based on ethylene/α-olefin (a-2), with said constituents (a-1) and (a-2) summing up to 100 parts by weight, and

said skin layer comprises an ultrahigh molecular weight polyolefin resin (Y),

wherein said ethylenic, thermoplastic elastomer (A) consists of a thermoplastic elastomer obtained by subjecting a mixture of the polyethylene resin (a-1) and the copolymer based on ethylene/α-olefin (a-2) to a dynamic heat treatment in the absence of a cross-linking agent, and

wherein said copolymer based on ethylene/α-olefin (a-2) is a copolymer of ethylene, an α-olefin and, optionally incorporated, non-conjugated polyene and has a Mooney viscosity ML_{1+4} (100 °C) of 90 - 250 and an ethylene content of 70 - 95 mole %, and

wherein the ethylenic thermoplastic elastomer (A) is one which has a compression set of 60 % or less as determined according to JIS K 6262 (at 70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (at 230 °C, 10 kg load), and

wherein the foamed body (X_{F1}) is formed by subjecting a foamable ethylenic thermoplastic elastomer composition (X_1) comprising the ethylenic thermoplastic elastomer (A) and 0.5 - 20 parts by weight of an organic or inorganic foaming agent of a heat decomposition type (B) per 100 parts by weight of the ethylenic thermoplastic elastomer (A) **and** the foaming agent (B) to foaming by co-extrusion with the foaming expansion ratio of the foamed body (X_{F1}) of at least twofold, and

wherein the foamed laminate is formed by co-extrusion of the foamable ethylenic thermoplastic elastomer composition (X_1) and the ultrahigh molecular weight polyolefin resin (Y) wherein the foamable ethylenic thermoplastic elastomer composition (X_1) foams by heat fusing to form the substrate layer of the foamed body (X_{F1}), and

wherein said ultrahigh molecular weight polyolefin resin (Y) is one which has an intrinsic viscosity (η) of 3.5 - 8.3 dl/g as determined in decalin at 135 °C.

5. (Currently amended) A foamed laminate based on olefin in which a substrate layer is laminated with a **non-foamed** skin layer, wherein the foamed laminate is a co-extruded product in which the substrate layer and the skin layer are heat fused and the substrate layer is foamed **by co-extrusion** by multilayer extrusion molding machine, wherein

said substrate layer comprises a foamed body (X_{F1}) comprising an uncrosslinked ethylenic thermoplastic elastomer (A) comprising 5 - 60 parts by weight of a polyethylene resin (a-1) and 40 - 95 parts by weight of a copolymer based on ethylene/α-olefin (a-2), with said constituents (a-1) and (a-2) summing up to 100 parts by weight, and

said skin layer comprises an olefinic thermoplastic elastomer composition (Z),

wherein said ethylenic thermoplastic elastomer (A) consists of a thermoplastic elastomer obtained by subjecting a mixture of the polyethylene resin (a-1) and the copolymer based on ethylene/α-olefin (a-2) to a dynamic heat treatment in the absence of a cross-linking agent, and

wherein said copolymer based on ethylene/α-olefin (a-2) is a copolymer of ethylene, an α-olefin and, optionally incorporated, non-conjugated polyene and has a Mooney viscosity ML_{1+4}(100 °C) of 90 - 250 and an ethylene content of 70 - 95 mole %, and

wherein the ethylenic thermoplastic elastomer (A) is one which has a compression set of 60 % or less as determined according to JIS K 6262 (at 70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (at 230 °C, 10 kg load), and

wherein the foamed body (X_{F1}) is formed by subjecting a foamable ethylenic thermoplastic elastomer composition (X_1) comprising the ethylenic thermoplastic elastomer (A) and 0.5 - 20 parts by weight of an organic or inorganic foaming agent of a heat decomposition type (B) per 100 parts by weight of the ethylenic thermoplastic elastomer (A) **and** the foaming agent (B) to foaming by co-extrusion with the foaming expansion ratio of the foamed body (X_{F1}) of at least twofold and

wherein the foamed laminate is formed by co-extrusion of the foamable ethylenic thermoplastic elastomer composition (X_1) and the olefinic thermoplastic elastomer composition (Z) wherein the foamable ethylenic thermoplastic elastomer composition (X_1) foams by heat fusing to form the substrate layer of the foamed body (X_{F1}), and

wherein said olefinic thermoplastic elastomer composition (Z) is one which comprises, per 100 parts by weight of an olefinic thermoplastic elastomer (C), at least one kind of lubricant (Z_L) selected from the group consisting of 0.5 - 25 parts by weight of an organopolysiloxane (D), 0.5 - 10 parts by weight of a fluorine-containing polymer (E), 0.5 - 10 parts by weight of an antistatic agent (F), 5 - 200 parts by weight of a polyolefin resin (G), 0.01 - 5 parts by weight of a fatty acid amide, 0.01 - 5 parts by weight of a metal soap, 0.01 - 5 parts by weight of an ester, 0.01 - 5 parts by weight of calcium carbonate and 0.01 - 5 parts by weight of a silicate, each in a proportion as given above.

6. (Currently amended) A foamed laminate based on olefin in which a substrate layer is laminated with a **non-foamed** skin layer, wherein the foamed laminate is a co-extruded product in which the substrate layer and the skin layer are heat fused and the substrate layer is foamed by co-extrusion by multilayer extrusion molding machine, wherein

said substrate layer comprises a foamed body (X_{F1}) comprising an uncrosslinked ethylenic thermoplastic elastomer (A) comprising 5 - 60 parts by weight of a polyethylene resin (a-1) and 40 - 95 parts by weight of a copolymer based on ethylene/α-olefin (a-2), with said constituents (a-1) and (a-2) summing up to 100 parts by weight, and

said skin layer comprises an olefinic thermoplastic elastomer composition (Z_1),

wherein said ethylenic thermoplastic elastomer (A) consists of a thermoplastic elastomer obtained by subjecting a mixture of the polyethylene resin (a-1) and the copolymer based on ethylene/α-olefin (a-2) to a dynamic heat treatment in the absence of a cross-linking agent, and

wherein said copolymer based on ethylene/α-olefin (a-2) is a copolymer of ethylene, an α-olefin and, optionally incorporated, non-conjugated polyene and has a Mooney viscosity $ML_{1+4}(100\ ^{o}C)$ of 90 - 250 and an ethylene content of 70 - 95 mole %, and

wherein the ethylenic thermoplastic elastomer (A) is one which has a compression set of 60 % or less as determined according to JIS K 6262 (at 70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (at 230 °C, 10 kg load), and

wherein the foamed body (X_{F1}) is formed by subjecting a foamable ethylenic thermoplastic elastomer composition (X_1) comprising the ethylenic thermoplastic elastomer (A) and 0.5 - 20 parts by weight of an organic or inorganic foaming agent of a heat decomposition type (B) per 100 parts by weight of the ethylenic thermoplastic elastomer (A) **and** the foaming agent (B) to foaming by co-extrusion with the foaming expansion ratio of the foamed body (X_{F1}) of at least twofold and

wherein the foamed laminate is formed by co-extrusion of the foamable ethylenic thermoplastic elastomer composition (X_1) and the skin layer comprises an olefinic thermoplastic elastomer composition (Z_1) wherein the foamable ethylenic thermoplastic elastomer composition (X_1) foams by heat fusing to form the substrate layer of the foamed body (X_{F1}), and

wherein said olefinic thermoplastic elastomer composition (Z_1) is one which comprises, per 100 parts by weight of an olefinic thermoplastic elastomer (C), at least one kind of lubricant selected from the group consisting of 0.5 - 25 parts by weight of an organopolysiloxane (D), 0.5 - 10 parts by weight of a fluorine-containing polymer (E) and 0.5 - 10 parts by weight of an antistatic agent (F), each in a proportion as given above.

7. (Currently amended) A foamed laminate based on olefin in which a substrate layer is laminated with a **non-foamed** skin layer, wherein the foamed laminate is a co-extruded product in which the substrate layer and the skin layer are heat fused and the substrate layer is foamed by co-extrusion by multilayer extrusion molding machine, wherein

said substrate layer comprises a foamed body (X_{F1}) comprising an uncrosslinked ethylenic thermoplastic elastomer (A) comprising 5 - 60 parts by weight of a polyethylene resin (a-1) and 40 - 95 parts by weight of a copolymer based on ethylene/α-olefin (a-2), with said constituents (a-1) and (a-2) summing up to 100 parts by weight, and

said skin layer comprises an olefinic thermoplastic elastomer composition (Z_2),

wherein said ethylenic thermoplastic elastomer (A) consists of a thermoplastic elastomer obtained by subjecting a mixture of the polyethylene resin (a-1) and the copolymer based on ethylene/α-olefin (a-2) to a dynamic heat treatment in the absence of a cross-linking agent, and

wherein said copolymer based on ethylene/α-olefin (a-2) is a copolymer of ethylene, an α-olefin and, optionally incorporated, non-conjugated polyene and has a Mooney viscosity $ML_{1+4}(100\ ^{o}C)$ of 90 - 250 and an ethylene content of 70 - 95 mole %, and

wherein the ethylenic thermoplastic elastomer (A) is one which has a compression set of 60 % or less as determined according to JIS K 6262 (at 70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (at 230 °C, 10 kg load), and

wherein the foamed body (X_{F1}) is formed by subjecting a foamable ethylenic thermoplastic elastomer composition (X_1) comprising the ethylenic thermoplastic elastomer (A) and 0.5 - 20 parts by weight of an organic or inorganic foaming agent of a heat decomposition type (B) per 100 parts by weight of the ethylenic thermoplastic elastomer (A) **and** the foaming agent (B) to foaming by co-extrusion with the foaming expansion ratio of the foamed body (X_{F1}) of at least twofold and

wherein the foamed laminate is formed by co-extrusion of the foamable ethylenic thermoplastic elastomer composition (X_1) and the skin layer comprises an olefinic thermoplastic elastomer composition (Z_2) wherein the foamable ethylenic thermoplastic elastomer composition (X_1) foams by heat fusing to form the substrate layer of the foamed body (X_{F1}), and

wherein the said olefinic thermoplastic elastomer composition (Z_2) is one which comprises, per 100 parts by weight of an olefinic thermoplastic elastomer (C), a polyolefin resin (G) in an amount of 5 - 200 parts by weight.

8. (Currently amended) A foamed laminate based on olefin in which a substrate layer is laminated with a **non-foamed** skin layer, wherein the foamed laminate is a co-extruded product in which the substrate layer and the skin layer are heat fused and the substrate layer is foamed by co-extrusion by multilayer extrusion molding machine, wherein

said substrate layer comprises a foamed body (X_{F1}) comprising an uncrosslinked ethylenic thermoplastic elastomer (A) comprising 5 - 60 parts by weight of a polyethylene resin (a-1) and 40 - 95 parts by weight of a copolymer based on ethylene/α-olefin (a-2), with said constituents (a-1) and (a-2) summing up to 100 parts by weight, and

said skin layer comprises an olefinic thermoplastic elastomer composition (Z_3),

wherein said ethylenic thermoplastic elastomer (A) consists of a thermoplastic elastomer obtained by subjecting a mixture of the polyethylene resin (a-1) and the copolymer based on ethylene/α-olefin (a-2) to a dynamic heat treatment in the absence of a cross-linking agent, and

wherein said copolymer based on ethylene/α-olefin (a-2) is a copolymer of ethylene, an α-olefin and, optionally incorporated, non-conjugated polyene and has a Mooney viscosity ML_{1+4}(100 °C) of 90 - 250 and an ethylene content of 70 - 95 mole %, and

wherein the ethylenic thermoplastic elastomer (A) is one which has a compression set of 60 % or less as determined according to JIS K 6262 (at 70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (at 230 °C, 10 kg load), and

wherein the foamed body (X_{F1}) is formed by subjecting a foamable ethylenic thermoplastic elastomer composition (X_1) comprising the ethylenic thermoplastic elastomer (A) and 0.5 - 20 parts by weight of an organic or inorganic foaming agent of a heat decomposition type (B) per 100 parts by weight of the ethylenic thermoplastic elastomer (A) **and** the foaming agent (B) to foaming by co-extrusion with the foaming expansion ratio of the foamed body (X_{F1}) of at least twofold and

wherein the foamed laminate is formed by co-extrusion of the foamable ethylenic thermoplastic elastomer composition (X_1) and the olefinic thermoplastic elastomer composition

(Z_3) wherein the foamable ethylenic thermoplastic elastomer composition (X_1) foams by heat fusing to form the substrate layer of the foamed body (X_{F1}), and

wherein said olefinic thermoplastic elastomer composition (Z_3) is one which comprises, per 100 parts by weight of an olefinic thermoplastic elastomer (C), at least one kind selected from the group consisting of 0.5 - 25 parts by weight of an organopolysiloxane (D), 0.5-10 parts by weight of a fluorine-containing polymer (E), 0.5 - 10 parts by weight of an antistatic agent (F), 0.01 - 5 parts by weight of a fatty acid amide, 0.01 - 5 parts by weight of a metal soap, 0.01 - 5 parts by weight of an ester, 0.01 - 5 parts by weight of calcium carbonate and 0.01 - 5 parts by weight of a silicate, each in a proportion given above, and which further comprises a polyolefin resin (G) in an amount of 5 - 200 parts by weight.

20. (Currently amended) A foamed laminate based on olefin in which a substrate layer is laminated with a **non-foamed** skin layer, wherein the foamed laminate is a co-extruded product in which the substrate layer **and the skin layer** are heat fused and the substrate layer is foamed by co-extrusion by multilayer extrusion molding machine, wherein

said substrate layer comprises a foamed body (X_{F2}) comprising an uncrosslinked olefinic thermoplastic elastomer composition (X_2) comprising 100 parts by weight of an olefinic thermoplastic elastomer (J) and 1 - 20 parts by weight of an olefinic thermoplastic resin (K),

said skin layer comprises an ultrahigh molecular weight polyolefin resin (Y), and optionally at least one of a softening agent, heat-resisting stabilizer, antistatic agent, weathering stabilizer, antioxidant, filler, coloring agent or a lubricant,

wherein said olefinic thermoplastic elastomer (J) is one which is obtained by subjecting a mixture comprising 5 - 60 parts by weight of a polyolefin resin (j-1) and 40 - 95 parts by weight of an ethylene/α-olefin copolymer rubber (j-2) resulting from copolymerization of ethylene, an α-olefin and, optionally incorporated, a non-conjugated polyene, with said constituents (j-1) and (j-2) summing up to 100 parts by weight, to a dynamic heat treatment,

said ethylene/α-olefin copolymer rubber (j-2) is one which has a Mooney viscosity ML_{1+4} (100 °C) of 10 - 250 and an ethylene content of 55 - 95 mole % and

said olefinic thermoplastic resin (K) is one which has an olefin content of 50 - 100 mole % and a melt flow rate (ASTM D-1238-65T, 230 °C, 2.16 kg load) of 0.01 - 2 g/10 min. and said ultrahigh molecular weight polyolefin resin (Y) is one which has an intrinsic viscosity (η) of 3.5 - 8.3 dl/g determined in decalin at 135 °C, and

wherein the olefinic thermoplastic elastomer composition (X_2) is one which has a compression set of 60 % or less as determined according to JIS K 6262 (at 70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (at 230 °C, 10 kg load), and

wherein the foamed body (X_{F2}) is formed by foaming a foamable composition based on olefin (X_3) comprising 100 parts by weight of the olefinic thermoplastic elastomer (J), 1 - 20 parts by weight of the olefinic thermoplastic resin (K) and 0.5 - 20 parts by weight of an organic or an inorganic foaming agent of heat-decomposition type (B) per 100 parts by weight of total sum of the olefinic thermoplastic elastomer (J) and the olefinic thermoplastic resin (K) by co-extrusion with the foaming expansion ratio of the foamed body ~~(X_{F1})~~ **(X_{F2})** of at least twofold, and

wherein the foamed laminate is formed by co-extrusion of the foamable composition based on olefin (X_3) and the ultrahigh molecular weight polyolefin resin (Y) wherein the foamable composition based on olefin (X_3) foams by heat fusing to form the substrate layer of the foamed body ~~(X_{F1})~~ **(X_{F2})** .

21. (Currently amended) A foamed laminate based on olefin in which a substrate layer is laminated with a **non-foamed** skin layer, wherein the foamed laminate is a co-extruded product in which the substrate layer and the skin layer are heat fused and the substrate layer is foamed by co-extrusion by multilayer extrusion molding machine, wherein

said substrate layer comprises a foamed body (X_{F2}) comprising an uncrosslinked olefinic thermoplastic elastomer composition (X_2) comprising 100 parts by weight of an olefinic thermoplastic elastomer (J) and 1 - 20 parts by weight of an olefinic thermoplastic resin (K), and

said skin layer comprises an olefinic thermoplastic elastomer composition (Z),

wherein said olefinic thermoplastic elastomer (J) is one which is obtained by subjecting a mixture comprising 5 - 60 parts by weight of a polyolefin resin (j-1) and 40 - 95 parts by weight of an ethylene/α-olefin copolymer rubber (j-2) resulting from copolymerization of ethylene, an α-olefin and, optionally incorporated, a non-conjugated polyene, with said constituents (j-1) and (j-2) summing up to 100 parts by weight, to a dynamic heat treatment,

said ethylene/α-olefin copolymer rubber (j-2) is one which has a Mooney viscosity ML_{1+4} (100 °C) of 10 - 250 and an ethylene content of 55 - 95 mole % and

said olefinic thermoplastic resin (K) is one which has an olefin content of 50 - 100 mole % and a melt flow rate (ASTM D-1238-65T, 230 °C, 2.16 kg load) of 0.01 - 2 g/10 min., and

wherein the olefinic thermoplastic elastomer composition (X_2) is one which has a compression set of 60 % or less as determined according to JIS K 6262 (at 70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (at 230 °C, 10 kg load), and

wherein the foamed body (X_{F2}) is formed by foaming a foamable composition based on olefin (X_3) comprising 100 parts by weight of the olefinic thermoplastic elastomer (J), 1 - 20 parts by weight of the olefinic thermoplastic resin (K) and 0.5 - 20 parts by weight of an organic or an inorganic foaming agent of heat-decomposition type (B) per 100 parts by weight of total sum of the olefinic thermoplastic elastomer (J) and the olefinic thermoplastic resin (K) by co-extrusion with the foaming expansion ratio of the foamed body ~~(X_{F1})~~ **(X_{F2})** of at least twofold, and

wherein the foamed laminate is formed by co-extrusion of the foamable composition based on olefin (X_3) and the olefinic thermoplastic elastomer composition (Z) wherein the foamable composition based on olefin (X_3) foams by heat fusing to form the substrate layer of the foamed body ~~(X_{F1})~~ **(X_{F2})**, and

said olefinic thermoplastic elastomer composition (Z) is one which comprises, per 100 parts by weight of an olefinic thermoplastic elastomer (C), at least one kind of lubricant (Z_L) selected from the group consisting of 0.5 - 25 parts by weight of an organopolysiloxane (D), 0.5 - 10 parts by weight of a fluorine-containing polymer (E), 0.5 - 10 parts by weight of an antistatic agent (F), 5 - 200 parts by weight of a polyolefin resin (G), 0.01 - 5 parts by weight of a fatty acid amide, 0.01 - 5 parts by weight of a metal soap, 0.01 - 5 parts by weight of an ester, 0.01 - 5

parts by weight of calcium carbonate and 0.01 - 5 parts by weight of a silicate, each in a proportion as given above.

22. (Currently amended) A foamed laminate based on olefin in which a substrate layer is laminated with a **non-foamed** skin layer, wherein the foamed laminate is a co-extruded product in which the substrate layer and the skin layer are heat fused and the substrate layer is foamed by co-extrusion by multilayer extrusion molding machine, wherein

said substrate layer comprises a foamed body (X_{F2}) comprising an uncrosslinked olefinic thermoplastic elastomer composition (X_2) comprising 100 parts by weight of an olefinic thermoplastic elastomer (J) and 1 - 20 parts by weight of an olefinic thermoplastic resin (K), and

said skin layer comprises an olefinic thermoplastic elastomer composition (Z_1),

wherein said olefinic thermoplastic elastomer (J) is one which is obtained by subjecting a mixture comprising 5 - 60 parts by weight of a polyolefin resin (j-1) and 40 - 95 parts by weight of an ethylene/α-olefin copolymer rubber (j-2) resulting from copolymerization of ethylene, an α-olefin and, optionally incorporated, a non-conjugated polyene, with said constituents (j-1) and (j-2) summing up to 100 parts by weight, to a dynamic heat treatment,

said ethylene/α-olefin copolymer rubber (j-2) is one which has a Mooney viscosity ML_{1+4} (100 °C) of 10 - 250 and an ethylene content of 55 - 95 mole % and

said olefinic thermoplastic resin (K) is one which has an olefin content of 50 - 100 mole % and a melt flow rate (ASTM D-1238-65T, 230 °C, 2.16 kg load) of 0.01 - 2 g/10 min., and

wherein the olefinic thermoplastic elastomer composition (X_2) is one which has a compression set of 60 % or less as determined according to JIS K 6262 (at 70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (at 230 °C, 10 kg load), and

wherein the foamed body (X_{F2}) is formed by foaming a foamable composition based on olefin (X_3) comprising 100 parts by weight of the olefinic thermoplastic elastomer (J), 1 - 20 parts by weight of the olefinic thermoplastic resin (K) and 0.5 - 20 parts by weight of an organic or an inorganic foaming agent of heat-decomposition type (B) per 100 parts by weight of total sum of the olefinic thermoplastic elastomer (J) and the olefinic thermoplastic resin (K) by co-extrusion with the foaming expansion ratio of the foamed body ~~(X_{F1})~~ **(X_{F2})** of at least twofold, and

wherein the foamed laminate is formed by co-extrusion of the foamable composition based on olefin (X_3) and the olefinic thermoplastic elastomer composition (Z_1) wherein the foamable composition based on olefin (X_3) foams by heat fusing to form the substrate layer of the foamed body ~~(X_{F1})~~ **(X_{F2})**, and

said olefinic thermoplastic elastomer composition (Z_1) is one which comprises, per 100 parts by weight of an olefinic thermoplastic elastomer (C), at least one kind of lubricant selected from the group consisting of 0.5 - 25 parts by weight of an organopolysiloxane (D), 0.5 - 10 parts by weight of a fluorine-containing polymer (E) and 0.5 - 10 parts by weight of an antistatic agent (F), each in a proportion as given above.

23. (Currently amended) A foamed laminate based on olefin in which a substrate layer is laminated with a **non-foamed** skin layer, wherein the foamed laminate is a co-extruded

product in which the substrate layer and the skin layer are heat fused and the substrate layer is foamed by co-extrusion by multilayer extrusion molding machine, wherein

said substrate layer comprises a foamed body (X_{F2}) comprising an uncrosslinked olefinic thermoplastic elastomer composition (X_2) comprising 100 parts by weight of an olefinic thermoplastic elastomer (J) and 1 - 20 parts by weight of an olefinic thermoplastic resin (K), and

said skin layer comprises an olefinic thermoplastic elastomer composition (Z_2),

wherein said olefinic thermoplastic elastomer (J) is one which is obtained by subjecting a mixture comprising 5 - 60 parts by weight of a polyolefin resin (j-1) and 40 - 95 parts by weight of an ethylene/α-olefin copolymer rubber (j-2) resulting from copolymerization of ethylene, an α-olefin and, optionally incorporated, a non-conjugated polyene, with said constituents (j-1) and (j-2) summing up to 100 parts by weight, to a dynamic heat treatment,

said ethylene/α-olefin copolymer rubber (j-2) is one which has a Mooney viscosity ML_{1+4} (100 °C) of 10 - 250 and an ethylene content of 55 - 95 mole % and

said olefinic thermoplastic resin (K) is one which has an olefin content of 50 - 100 mole % and a melt flow rate (ASTM D-1238-65T, 230 °C, 2.16 kg load) of 0.01 - 2 g/10 min., and

wherein the olefinic thermoplastic elastomer composition (X_2) is one which has a compression set of 60 % or less as determined according to JIS K 6262 (at 70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (at 230 °C, 10 kg load), and

wherein the foamed body (X_{F2}) is formed by foaming a foamable composition based on olefin (X_3) comprising 100 parts by weight of the olefinic thermoplastic elastomer (J), 1 - 20 parts by weight of the olefinic thermoplastic resin (K) and 0.5 - 20 parts by weight of an organic or an inorganic foaming agent of heat-decomposition type (B) per 100 parts by weight of total sum of the olefinic thermoplastic elastomer (J) and the olefinic thermoplastic resin (K) by co-extrusion with the foaming expansion ratio of the foamed body ~~(X_{F1})~~ **(X_{F2})** of at least twofold, and

wherein the foamed laminate is formed by co-extrusion of the foamable composition based on olefin (X_3) and the olefinic thermoplastic elastomer composition (Z_2) wherein the foamable composition based on olefin (X_3) foams by heat fusing to form the substrate layer of the foamed body ~~(X_{F1})~~ **(X_{F2})**, and

said olefinic thermoplastic elastomer composition (Z_2) is one which comprises, per 100 parts by weight of an olefinic thermoplastic elastomer (C), a polyolefin resin (G) in an amount of 5 - 200 parts by weight.

24. (Currently amended) A foamed laminate based on olefin in which a substrate layer is laminated with a **non-foamed** skin layer, wherein the foamed laminate is a co-extruded product in which the substrate layer and the skin layer are heat fused and the substrate layer is foamed by co-extrusion by multilayer extrusion molding machine, wherein

said substrate layer comprises a foamed body (X_{F2}) comprising an uncrosslinked olefinic thermoplastic elastomer composition (X_2) comprising 100 parts by weight of an olefinic thermoplastic elastomer (J) and 1 - 20 parts by weight of an olefinic thermoplastic resin (K), and

said skin layer comprises an olefinic thermoplastic elastomer composition (Z_3),

wherein said olefinic thermoplastic elastomer (J) is one which is obtained by subjecting a mixture comprising 5 - 60 parts by weight of a polyolefin resin (j-1) and 40 - 95 parts by

weight of an ethylene/α-olefin copolymer rubber (j-2) resulting from copolymerization of ethylene, an α-olefin and, optionally incorporated, a non-conjugated polyene, with said constituents (j-1) and (j-2) summing up to 100 parts by weight, to a dynamic heat treatment,

said ethylene/α-olefin copolymer rubber (j-2) is one which has a Mooney viscosity ML_{1+4} (100 °C) of 10 - 250 and an ethylene content of 55 - 95 mole % and

said olefinic thermoplastic resin (K) is one which has an olefin content of 50 - 100 mole % and a melt flow rate (ASTM D-1238-65T, 230 °C, 2.16 kg load) of 0.01 - 2 g/10 min., and

wherein the olefinic thermoplastic elastomer composition (X_2) is one which has a compression set of 60 % or less as determined according to JIS K 6262 (at 70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (at 230 °C, 10 kg load), and

wherein the foamed body (X_{F2}) is formed by foaming a foamable composition based on olefin (X_3) comprising 100 parts by weight of the olefinic thermoplastic elastomer (J), 1 - 20 parts by weight of the olefinic thermoplastic resin (K) and 0.5 - 20 parts by weight of an organic or an inorganic foaming agent of heat-decomposition type (B) per 100 parts by weight of total sum of the olefinic thermoplastic elastomer (J) and the olefinic thermoplastic resin (K) by co-extrusion with the foaming expansion ratio of the foamed body ~~(X_{F1})~~ **(X_{F2})** of at least twofold, and

wherein the foamed laminate is formed by co-extrusion of the foamable composition based on olefin (X_3) and the olefinic thermoplastic elastomer composition (Z_3) wherein the foamable composition based on olefin (X_3) foams by heat fusing to form the substrate layer of the foamed body ~~(X_{F1})~~ **(X_{F2})**, and

said olefinic thermoplastic elastomer composition (Z_3) is one which comprises, per 100 parts by weight of an olefinic thermoplastic elastomer (C), at least one kind of lubricant selected from the group consisting of 0.5 - 25 parts by weight of an organopolysiloxane (D), 0.5 - 10 parts by weight of a fluorine-containing polymer (E), 0.5 - 10 parts by weight of an antistatic agent (F), 0.01 - 5 parts by weight of a fatty acid amide, 0.01 - 5 parts by weight of a metal soap, 0.01 - 5 parts by weight of an ester, 0.01 - 5 parts by weight of calcium carbonate and 0.01 - 5 parts by weight of a silicate, each in a proportion given above, and further comprises a polyolefin resin (G) in an amount of 5 - 200 parts by weight.

53. (**currently amended**) A process for producing a foamed laminate **as claimed in claim 4, said process comprising** ~~based on olefin in which a substrate layer is laminated with a skin layer,~~

~~wherein said substrate layer comprises a foamed body (X_{F1}) comprising an ethylenic thermoplastic elastomer (A) comprising 5 – 60 parts by weight of a polyethylene resin (a-1) and 40 – 95 parts by weight of a copolymer based on ethylene/α-olefin (a-2), with said constituents (a-1) and (a-2) summing up to 100 parts by weight, and said skin layer comprises an ultrahigh molecular weight polyolefin (Y),~~

~~using a multilayer extrusion molding machine, comprising~~ the steps of

providing starting resin composition for the ~~said~~ substrate layer comprising the **uncrosslinked** ethylenic thermoplastic elastomer (A) and **[[a]] the** foaming agent (B) as claimed

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in claim 4, ~~of an amount necessary to blow up the composition upon heat fusing the two layers~~

providing the resin for skin layer of claim 4,

co-extruding the resin composition for the substrate layer together with the resin for the skin layer ~~from~~ by using a ~~the~~ multilayer extrusion molding machine, and

heat fusing these layers to thereby cause the substrate layer to foam up.~~,~~

~~wherein said ethylenic thermoplastic elastomer (A) consists of a thermoplastic elastomer obtained by subjecting a mixture of the polyethylene resin (a-1) and the copolymer based on ethylene/α-olefin (a-2) to a dynamic heat treatment in the absence of a cross-linking agent, and~~

~~wherein said copolymer based on ethylene/α-olefin (a-2) is a copolymer of ethylene, an α-olefin and, optionally incorporated, non-conjugated polyene and has a Mooney viscosity ML_{1+4} (100 °C) of 90 – 250 and an ethylene content of 70 – 95 mole % and~~

~~wherein said ultrahigh molecular, weight polyolefin resin (Y) is one which has as intrinsic viscosity [η] of 3.5 – 8.3 dl/g as determined in decalin at 135 °C.~~

54. (currently amended) **[[The]]** **A** process **for producing a foamed laminate as claimed in claim 5, said process comprising**

~~using a multilayer extrusion molding machine, comprising~~ **the steps of providing starting resin composition for the ~~said~~ substrate layer comprising the uncrosslinked ethylenic thermoplastic elastomer (A) and the foaming agent (B)** as claimed in claim 5,

providing the resin for the skin layer of claim 5,

co-extruding the resin composition for the substrate layer together with the resin for the skin layer by using a **~~from the~~ multilayer extrusion molding machine, and**

heat fusing these layers to thereby cause the substrate layer to foam up,

~~as claimed in claim 53, wherein~~

~~said substrate layer comrises a foamed body (X_{F1}) comprising an ethylenic thermoplastic elastomer (A) comprising 5 – 60 parts by weight of a polyethylene resin (a-1) and 40 – 95 parts by weight of a copolymer based on ethylene/α-olefin (a-2), with said constituents (a-1) and (a-2) summing up to 100 parts by weight, and~~

~~said skin layer comprises an olefinic thermoplastic elastomer composition (Z),~~

~~wherein said ethylenic thermoplastic elastomer (A) consists of a thermoplastic elastomer obtained by subjecting a mixture of the polyethylene resin (a-1) and the copolymer based on ethylene/α-olefin (a-2) to a dynamic heat treatment in the absence of a cross-linking agent, and~~

~~wherein said copolymer based on ethylene/α-olefin (a-2) is a copolymer of ethylene, an α-olefin and, optionally incorporated, non-conjugated polyene and has a Mooney viscosity ML_{1+4} (100 °C) of 90 – 250 and an ethylene content of 70 – 95 mole % and~~

~~wherein said olefinic thermoplastic elastomer composition (Z) is one which comprises, per 100 parts by weight of an olefinic thermoplastic elastomer (C), at least one kind of lubricant (Z_L) selected from the group consisting of 0.5 – 25 parts by weight of an organopolysiloxane (D), 0.5 – 10 parts by weight of a fluorine-containing polymer (E), 0.5 – 10 parts by weight of an antistatic agent (F), 5 – 200 parts by weight of a polyolefin resin~~

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~~(G), 0.01 – 5 parts by weight of a fatty acid amide, 0.01 – 5 parts by weight of a metal soap, 0.01 – 5 parts by weight of an ester, 0.01 – 5 parts by weight of calcium carbonate and 0.01 – 5 parts by weight of a silicate, each in a proportion as given above.~~

55. (Withdrawn, currently amended) **[[The]]** **A** process **for producing a foamed laminate as claimed in claim 6, said process comprising**

~~using a multilayer extrusion molding machine, comprising~~ **the steps of**

providing starting resin composition for the ~~said~~ substrate layer comprising the uncrosslinked ethylenic thermoplastic elastomer (A) and the foaming agent (B) as claimed in claim 6,

providing the resin for the skin layer of claim 6,

co-extruding the resin composition for the substrate layer together with the resin for the skin layer ~~from the~~ by using a **multilayer extrusion molding machine, and**

heat fusing these layers to thereby cause the substrate layer to foam up.

~~as claimed in claim 53, wherein~~

~~said substrate layer comprises a foamed body (X_{L1}) comprising an ethylenic thermoplastic elastomer (A) comprising 5 – 60 parts by weight of a polyethylene resin (a-1) and 40 – 95 parts by weight of a copolymer based on ethylene/α-olefin (a-2), with said constituents (a-1) and (a-2) summing up to 100 parts by weight, and~~

~~said skin layer comprises an olefinic thermoplastic elastomer composition (Z_1),~~

~~wherein said ethylenic thermoplastic elastomer (A) consists of a thermoplastic elastomer obtained by subjecting a mixture of the polyethylene resin (a-1) and the copolymer based on ethylene/α-olefin (a-2) to a dynamic heat treatment in the absence of a cross-linking agent, and~~

~~wherein said copolymer based on ethylene/α-olefin (a-2) is a copolymer of ethylene, an α-olefin and, optionally incorporated, non-conjugated polyene and has a Mooney viscosity ML_{1+4} (100 °C) of 90 – 250 and an ethylene content of 70 – 95 mole % and~~

~~wherein said olefinic thermoplastic elastomer composition (Z_1) is one which comprises, per 100 parts by weight of an olefinic thermoplastic elastomer (C), at least one kind of lubricant selected from the group consisting of 0.5 – 25 parts by weight of an organopolysiloxane (D), 0.5 – 10 parts by weight of a fluorine-containing polymer (E) and 0.5 – 10 parts by weight of an antistatic agent (F), each in a proportion as given above.~~

56. (currently amended) **[[The]]** **A** process **for producing a foamed laminate as claimed in claim 7, said process comprising**

~~using a multilayer extrusion molding machine, comprising~~ **the steps of**

providing starting resin composition for the ~~said~~ substrate layer comprising the uncrosslinked ethylenic thermoplastic elastomer (A) and the foaming agent (B) as claimed in claim 7,

providing the resin for the skin layer of claim 7,

co-extruding the resin composition for the substrate layer together with the resin for the skin layer ~~from the~~ by using a **multilayer extrusion molding machine, and**

heat fusing these layers to thereby cause the substrate layer to foam up.

~~as claimed in claim 53, wherein~~

~~said substrate layer comprises a foamed body (X_{F1}) comprising an ethylenic thermoplastic elastomer (A) comprising 5 – 60 parts by weight of a polyethylene resin (a-1) and 40 – 95 parts by weight of a copolymer based on ethylene/α-olefin (a-2), with said constituents (a-1) and (a-2) summing up to 100 parts by weight, and~~

~~said skin layer comprises an olefinic thermoplastic elastomer composition (Z_2),~~

~~wherein said ethylenic thermoplastic elastomer (A) consists of a thermoplastic elastomer obtained by subjecting a mixture of the polyethylene resin (a-1) and the copolymer based on ethylene/α-olefin (a-2) to a dynamic heat treatment in the absence of a cross-linking agent, and~~

~~wherein said copolymer based on ethylene/α-olefin (a-2) is a copolymer of ethylene, an α-olefin and, optionally incorporated, non-conjugated polyene and has a Mooney viscosity ML_{1+4} (100 °C) of 90 – 250 and an ethylene content of 70 – 95 mole % and~~

~~wherein said olefinic thermoplastic elastomer composition (Z_2) is one which comprises, per 100 parts by weight of an olefinic thermoplastic elastomer (C), a polyolefin resin (G) in an amount of 5 – 200 parts by weight.~~ Formatted: Strikethrough

57. (currently amended) **[[The]]** **A** process **for producing a foamed laminate as claimed in claim 8, said process comprising**

~~using a multilayer extrusion molding machine, comprising~~ **the steps of** Formatted: Strikethrough

providing starting resin composition for the ~~said~~ substrate layer comprising the uncrosslinked ethylenic thermoplastic elastomer (A) and the foaming agent (B) as claimed in claim 8, Formatted: Strikethrough

providing the resin for the skin layer of claim 8,

co-extruding the resin composition for the substrate layer together with the resin for the skin layer ~~from the~~ by using a **multilayer extrusion molding machine, and** Formatted: Strikethrough

heat fusing these layers to thereby cause the substrate layer to foam up.

~~as claimed in claim 53, wherein~~

~~said substrate layer comprises a foamed body (X_{F1}) comprising an ethylenic thermoplastic elastomer (A) comprising 5 – 60 parts by weight of a polyethylene resin (a-1) and 40 – 95 parts by weight of a copolymer based on ethylene/α-olefin (a-2), with said constituents (a-1) and (a-2) summing up to 100 parts by weight, and~~

~~said skin layer comprises an olefinic thermoplastic elastomer composition (Z_3),~~

~~wherein said ethylenic thermoplastic elastomer (A) consists of a thermoplastic elastomer obtained by subjecting a mixture of the polyethylene resin (a-1) and the copolymer based on ethylene/α-olefin (a-2) to a dynamic heat treatment in the absence of a cross-linking agent, and~~

~~wherein said copolymer based on ethylene/α-olefin (a-2) is a copolymer of ethylene, an α-olefin and, optionally incorporated, non-conjugated polyene and has a Mooney viscosity ML_{1+4} (100 °C) of 90 – 250 and an ethylene content of 70 – 95 mole % and~~

~~wherein said olefinic thermoplastic elastomer composition (Z_3) is one which comprises, per 100 parts by weight of an olefinic thermoplastic elastomer (C), at least one kind selected from the group consisting of 0.5 – 25 parts by weight of an organopolysiloxane (D), 0.5 – 10 parts by weight of a fluorine-containing polymer (E), 0.5 – 10 parts by weight of an antistatic agent (F), 0.01 – 5 parts by weight of a fatty acid amide,~~

~~0.01 – 5 parts by weight of a metal soap, 0.01 – 5 parts by weight of an ester, 0.01 – 5 parts by weight of calcium carbonate and 0.01 – 5 parts by weight of a silicate, each in a proportion as given above, and which further comprises a polyolefin resin (G) in an amount of 5 – 200 parts by weight.~~

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Cancel claim 52.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance: Note that the certified translation of the foreign priority paper JP 2000-203088 filed on 06/23/2008 is sufficient to overcome the art rejections over Kobayashi et al (US 6,589,664) in view of EP 976 782. As the instant application is fully supported by the foreign priority paper JP 2000-203088 and its Jun 30, 2000 filing date, Kobayashi is not prior art. It is noted that the filing date of the Kobayashi patent is November 1, 2000 which is after the filing date of instant application.

Applicants' amendment and the examiner's amendment together are sufficient to overcome the art rejections and the double patenting rejections and sufficient to place the instant claims in condition for allowance.

EP 974 617 (EP'617) teaches a laminate for use in glass run channels comprising a core and a skin member being bonded to the core by co-extrusion. EP'617 teaches EP'617 is silent as to the core being a foamed body of the olefin thermoplastic elastomer. Yorita, however, teaches a production of expanded olefinic thermoplastic elastomer for use in weather strip sponges. Yorita requires carbon dioxide in a supercritical state as a blowing agent to provide the expanded product excellent in flexibility, heat resistance and surface appearance. As pointed by Applicants, it is impossible to foam up only the core by supercritical carbon dioxide in the co-extrusion

of the foamed core and the unfoamed skin layer because the supercritical carbon dioxide would permeate and foam both the core layer and skin layer. The resulting laminate will thus include the skin layer which is not a non-foamed layer. Likewise, the combination of the references fails to teach or suggest the claimed invention. In addition, even if assuming that the foam core may be laminated to the skin layer by a process other than co-extrusion, the resulting laminate again would not be structurally the same as the laminate of the instant invention. In co-extrusion, the temperature and pressure are applied such that the layers are fused together at their interfaces. Likewise, the presently claimed laminate is formed with the foam core that is integrally formed with the skin layer. On the other hand, the foam core is laminated to the skin layer by the process other than the co-extrusion process, there will be a seam or a joint between the layers.

The combined teachings of Kobayashi et al (US 6,589,664) in view of Yorita do not achieve the claimed invention for the same reasons set forth above. Accordingly, the double patenting rejections are withdrawn.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485.

The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hai Vo/
Primary Examiner, Art Unit 1794